subject object generated at step S4-38, so that the minimum and maximum values of the polygons are known along each of the x, y and z axes (minX, maxX, minY, maxY, minZ, maxZ) are known.

Defining parameters:

```
float midX = (maxX + minX) / 2;
float midY = (maxY + minY) / 2;
float midZ = (maxZ + minZ) / 2;
float rX = (maxX - minX) / 2;
float rY = (maxY - minY) / 2;
float rZ = (maxZ - minZ) / 2;
```

Defining the radius of a bounding sphere (410 in Figure 7) around the bounding box bounding the polygons making up the 3D computer model:

```
float radius = sqrt(rX*rX + rY*rY + rZ*rZ);
```

Defining an identity perspective projection matrix:

```
glMatrixMode(GL_PROJECTION);
glLoadIdentity();
```

Defining the view range of the camera:

```
float view_range = 20.0;
```

Defining a perspective camera:

```
gluPerspective( 90*(radius/view_range),
viewer.Width()/viewer.Height(), 0.5, 25);
```

where:

90* (radius/view_range) defines the angle of the field of view.

viewer.Width ()/viewer.Height () defines the aspect ratio of the width to height of the image. In this embodiment, the values of viewer.Width () and viewer.Height () are set so that the sphere (410 in Figure 7) bounding the bounding box is within the values. This ensures that the bounding sphere is visible in the image.

The values 0.5 and 25 define the distance between the viewpoint and the near and far clipping planes of the pyramid defined by the field of view angle and aspect ratio.

Positioning the camera to look along the y-axis:

```
gluLookAt(midX, midY + view_range, midZ,
          midX, midY, midZ, 0, 0, 1)
```

where:

the first three parameters midX, midY + view_range and midZ define the viewpoint position of the camera. Thus, the camera is positioned a distance view_range from the centre of the bounding sphere (410 in Figure 7) in a horizontal direction parallel to the y-axis;

the next three parameters midX, midY and midZ specify a point along the desired line of sight. Thus, the camera is orientated to look at the centre of the bounding sphere;

the final three parameters 0, 0 and 1 indicate which direction is up in the coordinate system being used (that is, the z direction in this embodiment).

In summary, referring to Figure 7, the viewing camera 420 is positioned a distance "view_range" from the centre of the bounding sphere 410 in a horizontal direction parallel to the y-axis, and is orientated so that its viewing axis 430 is parallel to the y-axis and intersects the centre of the bounding sphere 410. In this way,